

## § 181.27

Chinawood oil (tung oil).  
Dehydrated castor oil.  
Linseed oil.  
Tall oil.

[42 FR 14638, Mar. 15, 1977; 42 FR 56728, Oct. 28, 1977]

### § 181.27 Plasticizers.

Substances classified as plasticizers, when migrating from food-packaging material shall include:

Acetyl tributyl citrate.  
Acetyl triethyl citrate.  
*p*-tert-Butylphenyl salicylate.  
Butyl stearate.  
Butylphthalyl butyl glycolate.  
Dibutyl sebacate.  
Di-(2-ethylhexyl) phthalate (for foods of high water content only).  
Diethyl phthalate.  
Diisobutyl adipate.  
Diisooctyl phthalate (for foods of high water content only).  
Diphenyl-2-ethylhexyl phosphate.  
Epoxidized soybean oil (iodine number maximum 6; and oxirane oxygen, minimum, 6.0 percent).  
Ethylphthalyl ethyl glycolate.  
Glycerol monooleate.  
Monoisopropyl citrate.  
Mono-, di-, and tristearyl citrate.  
Triacetin (glycerol triacetate).  
Triethyl citrate.  
3-(2-Xenolyl)-1,2-epoxypropane.

[42 FR 14638, Mar. 15, 1977; 42 FR 56728, Oct. 28, 1977, as amended at 50 FR 49536, Dec. 3, 1985]

### § 181.28 Release agents.

Substances classified as release agents, when migrating from food-packaging material shall include:

Dimethylpolysiloxane (substantially free from hydrolyzable chloride and alkoxy groups, no more than 18 percent loss in weight after heating 4 hours at 200 °C.; viscosity 300 centisokes, 600 centisokes at 25 °C, specific gravity 0.96 to 0.97 at 25 °C, refractive index 1.400 to 1.404 at 25 °C).  
Linoleamide (linoleic acid amide).  
Oleamide (oleic acid amide).  
Palmitamide (palmitic acid amide).  
Stearamide (stearic acid amide).

[42 FR 14638, Mar. 15, 1977; 42 FR 56728, Oct. 28, 1977]

### § 181.29 Stabilizers.

Substances classified as stabilizers, when migrating from food-packaging material shall include:

Aluminum mono-, di-, and tristearate.

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Ammonium citrate.  
Ammonium potassium hydrogen phosphate.  
Calcium glycerophosphate.  
Calcium phosphate.  
Calcium hydrogen phosphate.  
Calcium oleate.  
Calcium acetate.  
Calcium carbonate.  
Calcium ricinoleate.  
Calcium stearate.  
Disodium hydrogen phosphate.  
Magnesium glycerophosphate.  
Magnesium stearate.  
Magnesium phosphate.  
Magnesium hydrogen phosphate.  
Mono-, di-, and trisodium citrate.  
Mono-, di-, and tripotassium citrate.  
Potassium oleate.  
Potassium stearate.  
Sodium pyrophosphate.  
Sodium stearate.  
Sodium tetrapyrophosphate.  
Stannous stearate (not to exceed 50 parts per million tin as a migrant in finished food).  
Zinc orthophosphate (not to exceed 50 parts per million zinc as a migrant in finished food).  
Zinc resinate (not to exceed 50 parts per million zinc as a migrant in finished food).

[42 FR 14638, Mar. 15, 1977; 42 FR 56728, Oct. 28, 1977]

### § 181.30 Substances used in the manufacture of paper and paperboard products used in food packaging.

Substances used in the manufacture of paper and paperboard products used in food packaging shall include:

Aliphatic polyoxyethylene ethers.\*  
1-Alkyl (C<sub>6</sub>-C<sub>18</sub>)3-amino-3-aminopropane monoacetate.\*  
Borax or boric acid for use in adhesives, sizes, and coatings.\*  
Butadiene-styrene copolymer.  
Chromium complex of perfluoro-octane sulfonyl glycine for use on paper and paperboard which is waxed.\*  
Disodium cyanodithioimidocarbamate with ethylene diamine and potassium *N*-methyl dithiocarbamate and/or sodium 2-mercaptobenzothiazole (slimicides).\*  
Ethyl acrylate and methyl methacrylate copolymers of itaconic acid or methacrylic acid for use only on paper and paperboard which is waxed.\*  
Hexamethylene tetramine as a setting agent for protein, including casein.\*  
1-(2-Hydroxyethyl)-1-(4-chlorobutyl)-2-alkyl (C<sub>6</sub>-C<sub>17</sub>) imidazolinium chloride.\*  
Itaconic acid (polymerized).

\*Under the conditions of normal use, these substances would not reasonably be expected to migrate to food, based on available scientific information and data.

Melamine formaldehyde polymer.  
 Methyl acrylate (polymerized).  
 Methyl ethers of mono-, di-, and tripropylene glycol.\*  
 Myristo chromic chloride complex.  
 Nitrocellulose.  
 Polyethylene glycol 400.  
 Polyvinyl acetate.  
 Potassium pentachlorophenate as a slime control agent.\*  
 Potassium trichlorophenate as a slime control agent.\*  
 Resins from high and low viscosity polyvinyl alcohol for fatty foods only.  
 Rubber hydrochloride.  
 Sodium pentachlorophenate as a slime control agent.\*  
 Sodium-trichlorophenate as a slime control agent.\*  
 Stearato-chromic chloride complex.  
 Titanium dioxide.\*  
 Urea formaldehyde polymer.  
 Vinylidene chlorides (polymerized).

#### § 181.32 Acrylonitrile copolymers and resins.

(a) Acrylonitrile copolymers and resins listed in this section, containing less than 30 percent acrylonitrile and complying with the requirements of paragraph (b) of this section, may be safely used as follows:

(1) *Films.* (i) Acrylonitrile/butadiene/styrene copolymers—no restrictions.

(ii) Acrylonitrile/butadiene copolymers—no restrictions.

(iii) Acrylonitrile/butadiene copolymer blended with vinyl chloride-vinyl acetate (optional at level up to 5 percent by weight of the vinyl chloride resin—for use only in contact with oleomargarine).

(iv) Acrylonitrile/styrene copolymer—no restrictions.

(2) *Coatings.* (i) Acrylonitrile/butadiene copolymer blended with polyvinyl chloride resins—for use only on paper and paperboard in contact with meats and lard.

(ii) Polyvinyl chloride resin blended with either acrylonitrile/butadiene copolymer or acrylonitrile/butadiene styrene copolymer mixed with neoprene, for use as components of conveyor belts to be used with fresh fruits, vegetables, and fish.

(iii) Acrylonitrile/butadiene/styrene copolymer—no restrictions.

(iv) Acrylonitrile/styrene copolymer—no restrictions.

(3) *Rigid and semirigid containers.* (i) Acrylonitrile/butadiene/styrene copoly-

mer—for use only as piping for handling food products and for repeated-use articles intended to contact food.

(ii) Acrylonitrile/styrene resin—no restrictions.

(iii) Acrylonitrile/butadiene copolymer blended with polyvinyl chloride resin—for use only as extruded pipe.

(b) Limitations for acrylonitrile monomer extraction for finished food-contact articles, determined by using the method of analysis titled “Gas-Solid Chromatographic Procedure for Determining Acrylonitrile Monomer in Acrylonitrile-Containing Polymers and Food-Simulating Solvents,” which is incorporated by reference. Copies are available from the Center for Food Safety and Applied Nutrition (HFS-200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(1) In the case of single-use articles having a volume to surface ratio of 10 milliliters or more per square inch of food-contact surface—0.003 milligram/square inch when extracted to equilibrium at 120 °F with food-simulating solvents appropriate to the intended conditions of use.

(2) In the case of single-use articles having a volume to surface ratio of less than 10 milliliters per square inch of food-contact surface—0.3 part per million calculated on the basis of the volume of the container when extracted to equilibrium at 120 °F with food-simulating solvents appropriate to the intended conditions of use.

(3) In the case of repeated-use articles—0.003 milligram/square inch when extracted at a time equivalent to initial batch usage utilizing food-simulating solvents and temperatures appropriate to the intended conditions of use.

The food-simulating solvents shall include, where applicable, distilled water, 8 percent or 50 percent ethanol, 3 percent acetic acid, and either *n*-heptane or an appropriate oil or fat.